DESCRIPTION

CONTENT-RELATED INFORMATION DELIVERY SYSTEM

Technical Field

5   The present invention relates to information distribution technology. More particularly, the present invention relates to a content-related information delivery system for delivering information related to a content to a user device.

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Background Art

        Recently, users are offered a growing number of services for distribution of digitized contents such as music and movies stored in large-capacity recording mediums

15   such as CDs (Compact Discs) and DVDs (Digital Versatile Discs). One advantage of these services is that high-quality contents are delivered to users in volume at a time.

        In addition, contents distribution over a network is

20   also becoming common with the wide spread of broadband lines and always-on Internet connections. One advantage of such distribution is that bidirectional communications between a server and a user device makes it possible to deliver contents meeting the particular needs of an individual user.

25   JP patent application publication No. 09-307859 discloses a technique for delivering contents to users through the combined use of above distribution techniques.

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According to the disclosure, a recording medium stores a content composed of text data, image data, and so on. In addition, the recording medium stores an HTML (Hyper Text Markup Language) content composed of link information

5 showing a playback sequence of the stored data. A playback apparatus plays back the content according to the link information. In addition, for improving the interactivity of the content, the HTML content also includes link information to a related content stored on the server

10 connected via a network. Thus, the playback apparatus is enabled to acquire the related content from the server using the link information, and to play back the acquired related content.

Unfortunately, however, the above technique requires

15 that a content stored on the recording medium be an HTML content that includes link information to one or more related contents. When a content stored on the recording medium is not provided with link information, no related content can be acquired via a network.

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Disclosure of the Invention

The present invention is made in view of the above problem and aims to provide a content-related information delivery system for delivering contents related to another

25 content recorded on a recording medium to a user apparatus over a network in response to a user request. The content-related information delivery system according to

the present invention is applicable even if a content recorded on a recording medium is not an HTML content provided with link information to related contents.

In order to achieve the above aim, the present invention provides a content-related information delivery system having: a playback apparatus and a server. The playback apparatus includes: a monitoring unit operable to monitor a current playback position of a content during playback; a playback position information generating unit operable to acquire the current playback position from the monitoring unit and generate, using the acquired playback position, playback position information specifying a segment of the content; and a playback position information transmitting unit operable to transmit the generated playback position information to the server. The server includes: a playback position information receiving unit operable to receive the playback position information from the playback apparatus; a related information acquiring unit operable to acquire information related to the segment of the content specified by the received playback position information; and a related information transmitting unit operable to transmit the acquired related information to a destination apparatus.

With the structure stated above, the playback apparatus transmits playback position information specifying a segment of a content to the server. In response, the server transmits related information to a destination apparatus

according to the playback position information. Consequently, the playback apparatus is enabled to request the server for information related to the content even if the content is provided with no link information. In addition, the server is enabled to transmit the related information to the destination apparatus.

In another aspect, the present invention provides a playback apparatus for playing back a content and requesting a server for information related to the content. The a playback apparatus includes: a playback position information generating unit operable to generate playback position information specifying a segment of the content; and a playback position information transmitting unit operable to transmit the generated playback position information to the server.

With the structure stated above, the playback position information is generated by the playback apparatus and transmitted to the server. Consequently, information related to a content is requested even if the content subjected to playback does not include link information to the related information.

Here, the playback position information generating unit may include: selecting subunit operable to receive a user selection of a desired scene of the content; an acquiring subunit operable to acquire a playback position of the selected scene of the content; and a generating subunit operable to generate the playback position information that

includes the acquired playback position.

With the structure stated above, the playback apparatus receives a user selection of a favorite scene and generates playback position information specifying the user's favorite scene. That is to say, the playback apparatus can inform the server about the user's favorite scene, so that the playback apparatus can request the server for the user's favorite scene.

Here, the playback apparatus may further include a monitoring unit operable to monitor a current playback position of the content during playback. The acquiring subunit acquires the playback position of the selected scene from the monitoring unit.

With the structure stated above, the current playback position of a content is monitored at all times. Upon receipt of a user selection of a favorite scene, the playback apparatus generates playback position information by referring to the current playback position.

Here, the playback apparatus may further include a content identifier acquiring unit operable to acquire a content identifier uniquely identifying the content. The monitoring unit monitors the current playback position by measuring a time period elapsed from a start of the playback. The generating subunit generates the playback position information that includes the content identifier acquired by the content identifier acquiring unit and the playback position acquired by the acquiring subunit.

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With the structure stated above, the playback apparatus
acquires a content identifier and generates the playback
position information that includes the content identifier.
The server can identify each piece of playback position
information using the content identifier. That is to say,
the playback apparatus may transmit to the server a plurality
of pieces of playback position information for a plurality
of contents.

Here, the playback apparatus may further include: a
display unit operable to display the content on a screen;
and an on-screen position acquiring unit operable to receive
a user selection of a desired point on the screen displaying
the selected scene and acquire an on-screen position of
the selected point. The generating subunit generates the
playback position information that includes the content
identifier, the playback position, and the on-screen
position.

With the structure stated above, the playback apparatus
allows the user to select a specific image appearing in
a scene displayed on a screen. For example, a specific
actor, a restaurant, a theme park, a piece of furniture,
a building may be selected. Consequently, the playback
apparatus is enabled to inform the server about user's
interests in greater detail and to make a request for
information related not only to the user's favorite scene
but also to a specific image included the scene.

Here, the playback apparatus may read the content from

a portable recording medium and plays back the read content. The monitoring unit monitors the current playback position on the recording medium during playback of the content. The acquiring subunit acquires the playback position of the selected scene on the recording medium.

With the structure stated above, during playback of a content recorded on a recording medium, the playback apparatus monitors the storage position such as a track number or a sector number of a frame currently played. Thus, the playback apparatus is capable of generating playback position information of a content stored on the recording medium.

Here, the content may be composed of a plurality of frames. Each frame includes a playback time showing a time from a start of the content at which the frame is to be played back. The acquiring subunit acquires a playback time of a frame corresponding to the selected scene.

With the structure stated above, each of a plurality of frames constituting the content includes information showing playback time of the frame from the start of the content. Thus, without monitoring the current playback position of the content, the playback apparatus is capable of generating the playback information using the playback time shown by each frame. Note that each frame may include information showing the serial number in the playback sequence, rather than the playback time.

Here, the content may be composed of a plurality of

frames.   The selecting subunit acquires a frame
corresponding to the selected scene.   The generating
subunit generates the playback position information that
includes the acquired frame.

5   With the structure stated above, it is no longer
necessary that the playback apparatus monitors the current
playback position of the content or that each frame
constituting the content include information showing the
playback time of the frame.   Still, a request for related

10   information may be made by transmitting, as the playback
position information, data representing a frame to the
server.

        Here, the playback apparatus may further include a
related information receiving unit operable to receive from

15   the server, information related to the segment of the content
specified by the playback position information.

        With the structure stated above, the playback apparatus
can acquire information related to a content by generating
playback position information and transmitting the playback

20   position information to the server.   This holds even if
the content is not provided with link information to the
related information.

        Here, the playback apparatus may play back the content
in association with the related information received by

25   the related information receiving unit.

        With the structure stated above, even if a content
is not provided with link information to information related

to the content, the playback apparatus can acquire the related information by generating playback position information and transmitting the playback position information to the server. The playback apparatus then plays back the related information in association with playback of the content. In one specific example, the content is a movie and the related information is data representing subtitles. In this case, the movie and the subtitles are played back in synchronism.

In another aspect, the present invention provides a server for delivering information related to a content, including: a playback position information receiving unit operable to receive playback position information specifying a segment of the content from a playback apparatus that plays back the content; a related information acquiring unit operable to acquire information related to the segment of the content specified by the received playback position information; and a related information transmitting unit operable to transmit the acquired related information to a destination apparatus.

With the structure stated above, the server receives playback position information specifying a segment of a content from the playback apparatus. In response, the server transmits to a destination apparatus, information related to the segment of the content specified by the playback position information. That is so say, the server is capable of delivering related information to a

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destination apparatus without receiving, from the playback apparatus, link information showing e.g. the storage location of the related information on the server.

Here, the server may further include a related information storage unit operable to store, for each scene of the content, information related to the scene in association with a playback position of the scene. The related information receiving unit receives the playback position information that includes a playback position of a scene of the content. The related information acquiring unit acquires, from the related information storage unit, a piece of related information associated with the playback position that is included in the playback position information.

With the structure stated above, the server is enabled to provide, for each scene of a content, a piece of information related to the scene. Furthermore, since the server stores the related information, it is not necessary for the server to acquire the related information from an external apparatus.

Here, the related information storage unit may store, for each scene of the content, the related information which is a frame corresponding to the scene or information generated by processing the frame. Alternatively, the related information storage unit may store, for each scene of the content, the related information which is an image appearing in the scene in association with a position of

the image on a screen displaying the scene. The playback position information receiving unit receives the playback position information that includes a playback position of a scene and an on-screen position of an image. The related

5   information acquiring unit acquires a piece of related information specified by the playback position and the on-screen position that are included in the received playback position information.

With the structures stated above, the server receives

10   the playback position information that includes an on-screen position from the playback apparatus. Accordingly, the server is informed of user's interests in greater detail. For example, the on-screen position may specify an actor, a restaurant, a theme park, a piece

15   of furniture, or a building appearing in a scene. As a result, the server is enabled to transmit to the destination apparatus the related information that is likely to be of the user's interests.

Here, the server may further include: a user identifier

20   receiving unit operable to receive from the playback apparatus a user identifier uniquely identifying a user of the playback apparatus; a destination storage unit operable to store a plurality of user identifiers each in association with a piece of destination information showing

25   a destination apparatus for transmission of the related information. The related information transmitting unit acquires, with reference to the destination storage unit,

destination information associated with the user identifier received by the user identifier receiving unit, and transmits the related information to the destination apparatus shown by the acquired destination information.

5   Furthermore, the destination storage unit may store the user identifier uniquely identifying the user of the playback apparatus, in association with a piece of destination information showing the playback apparatus as the destination apparatus.   The related information

10   transmitting unit transmits the related information to the playback apparatus.   Alternatively, the destination information storage unit may store the user identifier uniquely identifying the user of the playback apparatus, in association with a piece of destination information

15   showing, as the destination apparatus, an apparatus other than the playback apparatus.   The related information transmitting unit transmits the related information to said other apparatus shown by the destination information.

       With the structures stated above, the user may inform

20   the server about a user identifier and an address of destination apparatus at the time of sign-up for the service. In response, the server stores the informed user identifier and address, so that related information is transmitted to the user-designated apparatus.

25   Here, the server may further include a billing unit operable to charge the user for the related information, based on the user identifier.

With the structure stated above, the server is enabled to charge the user for the related information delivered to the destination apparatus.

Here, the playback position information receiving unit may receive, as the playback position information, a frame out of a plurality of frames constituting the content. The related information acquiring unit generates the related information by processing the received frame.

With the structure stated above, the server receives, as the playback position information, a frame of the content from the playback apparatus. In response, the server generates related information by processing the received frame and transmitting the thus generated related information to the destination apparatus. Consequently, for example, the server may provide a high-quality still image generated by processing the frame and attaching a digital signature thereto. In this case, there is an advantage that it is not necessary for the server to generate and store related information in advance.

Brief Description of the Drawings

FIG. 1 is a view showing the configuration of a content-related information delivery system 1 consistent with a first embodiment of the present invention;

FIG. 2 is a view showing content data CNTDATA recorded on a recording medium 10;

FIG. 3 is a functional block diagram of a first playback

apparatus 20 included in the content-related information delivery system 1;

FIG. 4 is a view showing a counter unit 203;

FIG. 5 is a view showing a user information storage unit 204;

FIG. 6 is a view showing data included in playback position information TI1;

FIG. 7 is a functional block diagram of a server 30 included in the content-related information delivery system 1;

FIG. 8 is a view showing information stored in a destination storage unit 303;

FIG. 9 is a view showing information stored in a content storage unit 305;

FIG. 10 is a functional block diagram of a second playback apparatus 40 included in the content-related information delivery system 1;

FIG. 11 is a flowchart of the overall operation of the content-related information delivery system 1;

FIG. 12 is a flowchart of the operation of the first playback apparatus 20;

FIG. 13 is a flowchart of the operation of the server 30;

FIG. 14 is a flowchart of the operation of the second playback apparatus 40;

FIG. 15 is a view showing content data CNTDATA recorded on the recording medium 10, consistent with a modification

of the content-related information delivery system 1;

FIG. 16A is a view showing an example of a screen displayed on an output unit 210 of the first playback apparatus 20, consistent with a modification of the content-related information delivery system 1;

FIG. 16B is a view showing a second content displayed on the second playback apparatus 40 in the case where a scene 16 shown in FIG. 16A is selected;

FIG. 17 is a view showing the configuration of a content-related information delivery system 2 consistent with a second embodiment of the present invention;

FIG. 18 is a view showing content data CNTDATA recorded on a recording medium 60;

FIG. 19 is a functional block diagram of a playback apparatus 70;

FIG. 20 is a view showing an example of a screen displayed on an output unit 712 of the playback apparatus 70;

FIG. 21 is a view showing data included in playback position information TI1-1;

FIG. 22 is a view showing data included in bulletin board request information REQBBS;

FIG. 23 is a functional block diagram of a server 80;

FIG. 24 is a view showing data included in BBS storage unit 805;

FIG. 25 is a flowchart of the operation of the content-related information delivery system 2 (continued on FIG. 26); and

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FIG. 26 is the flowchart of the operation of the content-related information delivery system 2 (continued from FIG. 25).

5   Best Mode for Carrying Out the Invention
<<FIRST EMBODIMENT>>

The following describes a content-related information delivery system 1 consistent with a first embodiment of the present invention.

10   In the content-related information delivery system 1, when a first playback apparatus receives a user request during playback of a package content recorded on a recording medium, a server transmits a network content stored on the server to a second playback apparatus. The network content

15   is related to a scene being played back on the first playback apparatus at the time of receiving the user request (hereinafter, such a scene may be refereed to as "playback position").

20   <Configuration>

Here, the configuration of the content-related information delivery system 1 is described.

FIG. 1 is a view showing the configuration of the content-related information delivery system 1. As shown

25   in the figure, the content-related information delivery system 1 includes a recording medium 10, a first playback apparatus 20, a server 30, and a second playback apparatus

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The first playback apparatus 20, the server 30, and the second playback apparatus 40 are separately connected to a network 50. The recording medium 10 is mounted on the first playback apparatus 20 when put to use. In this embodiment, the network 50 typically is, but not limited to, the Internet. Yet, the network 50 may alternatively be a telephone network or a dedicated network.

1. Recording Medium 10

The recording medium 10 is a portable medium having content data CNTDATA recorded in advance. Specifically, the recording medium 10 is a DVD-ROM.

FIG. 2 is a view showing the content data CNTDATA recorded on the recording medium 10. As shown in the figure, the content data CNTDATA is composed of a content identifier CID-1 and a first content CNT1.

Specifically, the first content CNT1 is content data generated by compression coding a movie to an MPEG-2 (Moving Picture Expert Group-2) format. Note that the MPEG-2 format is mentioned by way of example and without limitation. Any format other than MPEG-2 may be used as long as the first playback apparatus 20 supports the format.

The content identifier CID-1 is a code or a character string uniquely identifying the first content CNT1. In this embodiment, the content identifier CID-1 is a movie title of the first content CNT1. Instead of the movie title,

however, the content identifier CID-1 may be a disc number uniquely identifying the recording medium 10.

2. First Playback Apparatus 20

FIG. 3 is a functional block diagram of the first playback apparatus 20. As shown in the figure, the first playback apparatus 20 includes an access unit 201, a decode unit 202, a counter unit 203, a user information storage unit 204, a request input unit 205, a control unit 206, a transmission unit 207, a server address input unit 208, an operation unit 209, and an output unit 210.

Specifically, the first playback apparatus 20 is a DVD system composed of a DVD player and a display unit. More specifically, the first playback apparatus 20 is a computer system composed generally of a microprocessor, a ROM, a RAM, a hard disk unit, a network connection unit, and an MPEG decoder.

(1) Access Unit 201

Specifically, the access unit 201 is a DVD-ROM drive unit composed generally of a turn table, an optical pickup, and a track buffer. The access unit 201 reads the content data CNTDATA stored on the recording medium 10 in the following manner.

First, upon placement of the recording medium 10 onto the turn table, the access unit 201 issues to the control unit 206 a signal indicating a start of reading the content data CNTDATA.

Subsequently, the optical pickup reads the content identifier CID-1 with a laser beam and outputs the read content identifier CID-1 to the counter unit 203. Next, the optical pickup sequentially reads the first content

5 CNT1 and outputs the read first content CNT1 to the decode unit 202 via a track buffer.

(2) Decode Unit 202

The decode unit 202 includes an MPEG-2 video decoder, an MPEG-2 audio decoder, a video buffer, and an audio buffer.

10 The decode unit 202 separates the first content CNT1 that is sequentially outputted from the access unit 201 into video data and audio data. The decode unit 202 decompresses the separated video data into a video signal using the MPEG-2 video decoder, and the separated audio

15 data into an audio signal using the MPEG-2 audio decoder. The decode unit 202 sequentially outputs the decompressed video and audio signals to the output unit 210.

Note that the decode unit 202 may be implemented by software or hardware.

20 (3) Counter Unit 203

The counter unit 203 has a counter CTR and an area for storing a content identifier.

The counter CTR is a value used for measuring a playback time of the first content CNT1. Specifically, the counter

25 CTR takes on an eight-digit decimal number ranging from "0" to "99,999,999".

On receiving an initializing instruction from the

control unit 206, the counter unit 203 performs initialization by resetting the value of the count CTR to "0" and discarding the currently held content identifier.

On receiving the content identifier CID-1 from the access unit 201, the counter unit 203 stores the content identifier CID-1, as shown in FIG. 4. In addition, the counter unit 203 starts measuring playback time of the content. Specifically, the counter CTR starts counting up from "0" by increment of "1" per 1 ms.

Note that the value taken on the counter CTR is not limited to an 8-digit decimal number. The counter CTR may be able to hold any digit of numbers in any numerical system. The counter CTR may be implemented by time-code used for synchronizing the video and audio. In addition, the counter CTR locates the current playback position of the first content CNT1 even if the first playback apparatus 20 is capable of fast forwarding and rewinding.

(4) User Information Storage Unit 204

As shown in FIG. 5, the user information storage unit 204 stores a user identifier UID-1. The user identifier UID-1 is an identifier uniquely identifying the user of first playback apparatus 20. Specifically, the user identifier UID-1 used in this embodiment is a serial number of the first playback apparatus 20 written into the user information storage unit 204 at the time of manufacturing.

It is naturally appreciated that the user identifier UID-1 is not limited to the serial number of the playback

apparatus. Alternatively, a user's credit card number may be used. In this case, the user inputs his credit card number via the operation unit 209 on initialization of the first playback apparatus 20. In response, the control unit

5   206 stores the inputted credit card number to the user information storage unit 204.

Alternatively, the user identifier UID-1 may be assigned to the user by making user registration on a content provider's server via a Web service. The user then inputs

10   the thus assigned user identifier UID-1 to the first playback apparatus 20 using the operation unit 209.

Alternatively, the user identifier UID-1 may be a network address ADR-1 of the second playback apparatus 40.

(5) Request Input Unit 205

15   Specifically, the request input unit 205 includes an infrared receiver, for example. The request input unit 205 receives an infrared signal indicative of request information REQ from the operation unit 209 and passes the received request information REQ to the control unit 206.

20   The request information REQ is generated in response to a user operation made to the operation unit 209 during the time the decode unit 202 and the output unit 210 are producing playback of the first content CNT1. The request information REQ is used to specify a playback position

25   requested by the user.

(6) Control Unit 206

The control unit 206 is composed generally of a

microprocessor, a ROM, and a RAM. The control unit 206 is connected to the access unit 201, the counter unit 203, the user information storage unit 204, the request input unit 205, and the transmission unit 207. The control unit

5   206 controls the overall operation of the first playback apparatus 20.

On receiving from the access unit 201 a signal indicating a start of reading the content data CNTDATA, the control unit 206 outputs an initializing instruction

10   to the counter unit 203.

On receiving request information REQ from the request input unit 205, the control unit 206 acquires from the counter unit 203 the content identifier CID-1 and the counter value held in the counter CTR at the point of time. The control

15   unit 206 further acquires the user identifier UID-1 from the user information storage unit 204. Note that the counter value held in the counter CTR at the point of time is denoted as the "counter CTR-n". The control unit 206 then generates playback position information TI1 shown in

20   FIG. 6 from the thus acquired content identifier CID-1, counter CTR-n, and user identifier UID-1.

The playback position information TI1 is information requesting transmission of a network content that is related to a specific playback position shown by the counter CTR-n,

25   in the first content CNT1 identified by the content identifier CID-1. The destination of the network content is a device registered in advance by the user identified

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by the user identifier UID-1.

The control unit 206 outputs the generated playback position information TI1 to the transmission unit 207.

(7) Transmission Unit 207

The transmission unit 207 receives the playback position information TI1 from the control unit 206, and the server address S-ADR from the server address input unit 208. The transmission unit 207 then transmits the playback position information TI1 to the server address S-ADR via the network 50.

(8) Server Address Input Unit 208

Specifically, the server address input unit 208 includes an infrared receiver, for example. The server address input unit 208 receives an infrared signal indicative of the server address S-ADR from the operation unit 209 and passes the received server-address S-ADR to the transmission unit 207. Note that the server address S-ADR is a network address of the server 30, such as an e-mail address or an IP address.

(9) Operation Unit 209

The operation unit 209 includes an operation panel provided with a plurality of buttons, for example, and also includes an infrared emitter. The operation unit 209 is a remote controller via which the first playback apparatus 20 is remotely controlled. At a push of a button on the operation panel by the user, the operation unit 209 generates an operation signal corresponding to the pushed button and

transmits the operation signal by way of infrared communications to the infrared receiver of the first playback apparatus 20.

5   Specific examples of the operation signals generated by the operation unit 209 include the request information REQ and the server address S-ADR. At a push of a specific button by a user during playback by the output unit 210 of the first content CNT1, the operation unit 209 generates request information REQ and transmits the generated request
10   information REQ to the request input unit 205. Also, the operation unit 209 receives a user input of the server address S-ADR and transmits the received server address S-ADR to the server address input unit 208.

(10) Output Unit 210

15   Specifically, the output unit 210 is a display unit including a display screen and a speaker. The output unit 210 sequentially receives the video and audio signals from the decode unit 202, and sequentially outputs the video signal to the display screen and the audio signal to the
20   speaker.

3. Server 30

The server 30 stores and manages a plurality of network contents for each of a plurality of package contents. The
25   server 30 has a network address S-ADR.

FIG. 7 is a functional block diagram of the server 30. As shown in the figure, the server 30 includes a

reception unit 301, a destination acquiring unit 302, a destination storage unit 303, a content acquiring unit 304, a content storage unit 305, and a transmission unit 306.

Specifically, the server 30 is a computer system composed generally of a microprocessor, a ROM, a RAM, a hard disk unit, and a network connection unit.

(1) Reception Unit 301

The reception unit 301 includes a network connection unit, and receives the playback position information TI1 from the first playback apparatus 20 via the network 50. As shown in FIG. 6, the playback position information TI1 is composed of the user identifier UID-1, the content identifier CID-1, and the counter CTR-n. The reception unit 301 extracts the user identifier UID-1 from the received playback position information TI1 and passes to the destination acquiring unit 302. The reception unit 301 also extracts the content identifier CID-1 and counter CTR-n from the received playback position information TI1 and passes to the content acquiring unit 304.

(2) Destination Acquiring Unit 302

On receiving the user identifier UID-1 from the reception unit 301, the destination accruing unit 302 acquires the destination address ADR-1 associated with the received user identifier UID-1, from the later-described destination storage unit 303.

(3) Destination Storage Unit 303

FIG. 8 is a view showing the information stored in

the destination storage unit 303. The destination storage unit 303 stores as many as k (k is an integer equal to or greater than 1) user identifiers and destination addresses in a one-to-one association. More specifically, the
5   destination storage unit 303 stores the user identifier UID-1 in association with the destination address ADR-1, the user identifier UID-2 in association with the destination address ADR-2 ...and the user identifier UID-k in association with the destination address ADR-k.

10   Each destination address is information used by the server 30 after receiving playback position information from a device identified by a corresponding user address. Using the destination address, the server 30 specifies a destination device to which a network content related to
15   the received playback position information is requested to be transmitted. Specifically, the destination address is a network address, such as an e-mail address or an IP address, of a destination device of a network content.

According to FIG. 8, when receiving playback position
20   information that includes the user identifier UID-1, the server 30 operates to transmit a network content related to the playback position information TI1 to a device having the network address ADR-1.

Note that the destination storage unit 303 stores the
25   user identifiers and destination addresses through prior registration by users. For example, the users may in advance inform the server 30 about the user identifiers

and destination addresses by post or via a Web service.

(4) Content Acquiring Unit 304

The content acquiring unit 304 receives the content identifier CID-1 and the counter CTR-n from the reception unit 301.

The content acquiring unit 304 selects a first content group 305a from the later-described content storage unit 305, based on the received content identifier CID-1. The first content group 305a is a group of network contents all related to the first content CNT1 that is identified by the content identifier CID-1. Next, the content acquiring unit 304 selectively acquires a second content CNT2-1-n out of the first content group 305a, based on the received counter CTR-n.

The content acquiring unit 304 then outputs the acquired second content CNT2-1-n to the transmission unit 306.

(5) Content Storage Unit 305

As shown in FIG. 9, the content storage unit 305 stores as many as m (m is an integer equal to or greater than 1) content groups. Each content group in turn includes a plurality of network contents. Hereinafter, a specific description is given.

The content storage unit 305 stores the first content group 305a, a second content group 305b, … and a mth content group 305c. The first content group 305a is a group of network contents all related to the first content CNT1

identified by the content identifier CID-1. Similarly, the second content group 305b is a group of network contents all related to a package content identified by the content identifier CID-2, and the mth content group 305c is a group of network contents all related to a package content identified by the content identifier CID-m.

The first content group 305a includes the following network contents each related to a specific playback position within the first content CNT1: a second content CNT2-1-1 that relates to a playback position shown by the counter CTR-1; a second content CNT2-1-2 that relates to a playback position shown by the counter CTR-2; a second content CNT2-1-3 that relates to a playback position shown by the counter CTR-3; ...and a second content CNT2-1-n that relates to a playback position shown by the counter CTR-n.

Note that the second contents CNT2-1-1, CNT2-1-2, CNT2-1-3 ... and CNT2-1-n are wallpaper data (still image data) of scenes of the first content CNT1, which is a movie. The wall paper data is in a format supported by the second playback apparatus 40. In this embodiment, the format is JPEG (Joint Photographic Experts Group).

In short, the first content group 305a includes a plurality of sets of data each composed of a movie title (content identifier), a playback position (counter CTR-n), and a piece of wallpaper data (second content CNT2-1-n). Note that the wall paper data is digitally watermarked to prohibit unauthorized copying.

Although not illustrated, the second content group 305b includes second contents CNT2-2-1, CNT2-2-2, CNT2-2-3 … and CNT2-2-n, which are network contents each related to a specific playback position within a package content

5 identified by the content identifier CID-2. Specifically, the second contents CNT2-2-1, CNT2-2-2, CNT2-2-3 … and CNT2-2-n relate to the playback positions shown by the counters CTR-1, CTR-2, CTR-3, … and CTR-n, respectively.

Similarly, although not illustrated, the mth content

10 group 305c includes second contents CNT2-m-1, CNT2-m-2, CNT2-m-3 … and CNT2-m-n, which are network contents each related to a specific playback position within a package content identified by the content identifier CID-m. Specifically, the second contents CNT2-m-1, CNT2-m-2,

15 CNT2-m-3 … and CNT2-m-n relate to the playback positions shown by the counters CTR-1, CTR-2, CTR-3, … and CTR-n, respectively.

Note that the above information stored in the content storage unit 305 is registered by a content provider in

20 advance.

(6) Transmission Unit 306

The transmission unit 306 receives the destination address ADR-1 from the destination acquiring unit 302, and the second content CNT2-1-n from the content acquiring unit

25 304. The transmission unit 306 then transmits the second content CNT2-1-n to the destination address ADR-1 via the network 50.

4. Second Playback Apparatus 40

The second playback apparatus 40 is owned by the same user as the first playback apparatus 20.

FIG. 10 is a functional block diagram of the second playback apparatus 40. As shown in the figure, the second playback apparatus 40 includes a transmission/reception unit 401, a decode unit 402, a display unit 403, a control unit 404, an antenna 405, a speaker 406, and a microphone 407. Specifically, the second playback apparatus 40 is a mobile phone capable of radio communications and composed generally of a microprocessor, a ROM, a RAM, a liquid crystal display, an operation key unit, and an antenna.

The control unit 404, the antenna 405, the speaker 406, and the microphone 407 shown in FIG. 10 are the elements for the second playback apparatus 40 to carry out the mobile phone functions. Yet, no description thereof is given here because such elements and functions are already known in the art. Hereinafter, a description is given to the characteristic elements of the second playback apparatus 40 in the content-related information delivery system 1.

(1) Transmission/Reception Unit 401

The transmission/reception unit 401 performs transmission of radio waves with a non-illustrated mobile station, thereby receiving the second content CNT2-1-n from the server 30 via the network 50 and the mobile station. The transmission/reception unit 401 passes the received

second content CNT2-1-n to the decode unit 402.

(2) Decode Unit 402

Specifically, the decode unit 402 is a JPEG decoder, and receives the second content CNT2-1-n from the transmission/reception unit 401. The decode unit 402 then decodes the received second content CNT2-1-n and outputs the decoded second content CNT-2-1-n to the display unit 403.

(3) Display Unit 403

The display unit 403 includes a liquid crystal display screen and an image storage area. The display unit 403 receives the second content CNT2-1-n decoded by the decode unit 402 to store into the image storage area. When receiving from the control unit 404 a signal indicating that the second playback apparatus 40 is in a "standby" status, the display unit 403 reads the second content CNT2-1-n from the image storage area and displays the read second content CNT2-1-n on the liquid crystal display screen.

<Operation>

Now, a description is given to the operation of the content-related information delivery system 1, with reference to flowcharts shown in FIGs. 11-14.

1. Overall Operation

FIG. 11 is a flowchart of the overall operation of the content-related information delivery system 1.

First of all, the first playback apparatus 20 performs predetermined processing (step S11), followed by predetermined processing by the server 30 (step S12). Finally, the second playback apparatus 40 performs predetermined processing (step S13), thereby completing the entire processing.

2. Operation of First Playback Apparatus 20

With reference to a flowchart shown in FIG. 12, a description is given to the operation of the first playback apparatus 20 to carry out the predetermined processing. Note that the operation described below is details of the step S11 shown in FIG. 11. The first playback apparatus 20 is triggered to start the predetermined processing when the recording medium 10 is mounted to the access unit 201.

The access unit 201 issues a signal to the control unit 206 to indicate a start of reading the content data CNTDATA from the recording medium 10. On receiving the signal indicative of the read start, the control unit 206 issues an initialization signal to the counter unit 203. On receiving the initialization signal, the counter unit 203 resets the counter value (step S100).

Next, the access unit 201 reads the content identifier CID-1 from the recording medium 10, and passes the read content identifier CID-1 to the counter unit 203. In response, the counter unit 203 stores the content identifier CID-1 therein, and starts measuring the time (step S101)

by automatically incrementing the counter CTR by 1 per 1 ms. Independently of the operation of the counter unit 203 to count up the counter CTR, the first playback apparatus 20 performs the step S102 onward.

5   The access unit 201 extracts part of the first content CNT1 from the recording medium 10 (step S102), and passes the extracted part of the first content CNT1 to the decode unit 202 (step S103). On receiving part of the first content CNT1 from the access unit 201, the decode unit 202 separates

10   the received part into video data and audio data, and decode the separated data into video and audio signals. The decode unit 202 then passes the resulting signals representing part of the first content CNT1 to the output unit 210. The output unit 210 plays back the part of the first content

15   CNT1 (step S104).

Here, a judgment is made as to whether the request input unit 205 has received request information REQ via the operation unit 209 (step S105). When it is judged that no request information REQ has been received (step S105,

20   NO), the processing goes onto the step S112.

When it is judged that the request input unit 205 has received request information REQ via the operation unit 209, the request input unit 205 passes the received request information REQ to the control unit 206 (step S106).

25   On receiving the request information REQ, the control unit 206 acquires the content identifier CID-1 stored in the counter unit 203 and also acquires the counter CTR-n,

which is a counter value held at that time (step S107).
In addition, the control unit 206 acquires the user
identifier UID-1 from the user information storage unit
204 (step S108).

5   Next, the control unit 206 generates playback position
information TI1 from the content identifier CID-1 and
counter CTR-n both acquired in the step S107 as well as
the user identifier UID-1 acquired in the step S108 (see
FIG. 6). The control unit 206 outputs the thus generated

10   playback position information TI1 to the transmission unit
207 (step S109).

On the other hand, the server address input unit 208
receives an input of the server address S-ADR via the
operation unit 209, and passes the received server address

15   S-ADR to the transmission unit 207 (step S110).

With reference to the server address S-ADR, the
transmission unit 207 transmits the playback position
information TI1 to the server 30 (step S111).

Next, the access unit 201 judges whether the first

20   content CNT1 included in the content data CNTDATA has been
entirely outputted (step S112). On outputting the entire
first content CNT1 (step S112, YES), the processing goes
back to the steps of the flowchart shown in FIG. 11.

On the other hand, when the first content CNT1 has

25   not yet been completely outputted (step S112, NO), the access
unit 201 goes back to the step S102 to continue the
processing.

3. Operation of Server 30

  With reference to the flowchart shown in FIG. 13, a description is given to the operation of the server 30 to carry out the predetermined processing. Note that the operation described below is details of the step S12 shown in FIG. 11.

  The reception unit 301 monitors whether playback position information TI1 is received from the first playback apparatus 20 over the network 50 (step S151). While no playback position information TI1 has been received (step S151, NO), the processing moves onto the step S13 of the flowchart shown in FIG. 11. On receiving playback position information TI1 (step S151, YES), the reception unit 301 extracts the user identifier UID-1, the content identifier CID-1, and the counter CTR-n from the received playback position information TI1 (step S152).

  The reception unit 301 then outputs the extracted user identifier UID-1 to the destination acquiring unit 302 (step S153), and the extracted content identifier CID-1 and counter CTR-n to the content acquiring unit 304 (step S154).

  The destination acquiring unit 302 acquires from the destination storage unit 303, the destination address ADR-1 that is associated with the user identifier UID-1 received from the reception unit 301, and outputs the acquired destination address ADR-1 to the transmission unit 306 (step S155). Specifically, the destination acquiring unit 302

extracts from the destination storage unit 303, the destination address ADR-1 stored in association with the user identifier UID-1.

In addition, the content acquiring unit 304 acquires the second content CNT2-1-n from the content storage unit 305, based on the content identifier CID-1 and the counter CTR-n both received from the reception unit 301. The content acquiring unit 304 then outputs the thus acquired second content CNT2-1-n to the transmission unit 306 (step S156). Specifically, the content acquiring unit 304 first specifies, out of a plurality of content groups stored in the content storage unit 305, the first content group 305a corresponding to the first content CNT1 identified by the content identifier CID-1. The content acquiring unit 304 then specifies, out of a plurality of contents included in the thus specified first content group 305a, the second content CNT2-1-n corresponding to the counter CTR-n, and extracts the thus specified second content CNT2-1-n.

Next, the transmission unit 306 receives the destination address ADR-1 from the destination acquiring unit 302, and the second content CNT2-1-n from the content acquiring unit 304. The transmission unit 306 then transmits the second content CNT2-1-n to the second playback apparatus 40 at the destination address ADR-1 over the network 50 (step S157). The processing then goes back to the flowchart shown in FIG. 11.

3. Operation of Second Playback Apparatus 40

   With reference to FIG. 14, a description is now given to the operation of the second playback apparatus 40. Note that the operation described below is details of the step S13 shown in FIG. 11.

   The transmission/reception unit 401 of the second playback apparatus monitors whether the second content CNT2-1-n is received from the server 30 over the network 50. While the second content CNT 2-1-n is not received (step S201, NO), the processing returns to the flowchart shown in FIG. 11. On receiving the second content CNT2-1-n (step S201, YES), the transmission/reception unit 401 passes the received second content CNT2-1-n to the decode unit 402 (step S202). On receiving the second content CNT2-1-n, the decode unit 402 decodes the received second content CNT2-1-n and outputs the decoded second content CNT2-1-n to the display unit 403 (step S203). The display unit 403 displays the received second content CNT2-1-n on the LCD screen while in the standby status. The processing then goes back to the flowchart shown in FIG. 11.

<Modifications>

   The present invention has been described by way of the above embodiment. It is naturally appreciated, however, that the present invention is not limited to the specific embodiment disclosed above, and modifications including the following still fall within the scope of the present

37

invention.

(1) The recording medium 10 is not limited to the DVD-ROM. The recording medium 10 may be a BD (Blu-ray Disc) or CD-ROM.

Furthermore, the first content CNT1 stored on the recording medium 10 is not limited to a movie. The first content may be still image data, video data, or music data, as long as the data is in a format that can be played back by the first playback apparatus 20.

(2) The recording medium 10 may additionally store the server address S-ADR within the content data CNTDATA, as shown in FIG. 15.

The access unit 201 of the first playback apparatus 20 judges whether the server address S-ADR is stored on the recording medium 10. When the server address S-ADR is stored, the access unit 201 reads the server address S-ADR from the recording medium 10. When the server address S-ADR is not stored, the server address input unit 208 receives an input of the server address S-ADR via the operation unit 209. Alternatively, the first playback apparatus 20 may store the server address S-ADR in advance.

(3) The second content CNT2-1-n is not limited to wallpaper data. Alternatively, the second content CNT2-1-n may be data representing subtitles of the first content CNT1 which is a movie. Alternatively, the second content CNT2-1-n may be video data, music data, text data, or BBS (Bulletin Board System) data as long as the data is in a format supported by the second playback apparatus

40. In the case of video data, the format may be an MPEG-4 format, which is a compression coding standard suitable for transmission to movable phones.

(4) The first playback apparatus 20 is not limited to a DVD system composed of a DVD player and a display screen. Alternatively, the first playback apparatus 20 may be a personal computer. In addition, the second playback apparatus 40 is not limited to a mobile phone. Alternatively, the second playback apparatus 40 may be a PDA or a personal computer.

Furthermore, the first playback apparatus 20 and the second playback apparatus 40 may be a single apparatus. That is, the first playback apparatus 20 transmits playback position information TI1 to the server 30 during playback of the first content CNT1. In response, the server 30 transmits the second content CNT2-1-n related to the first content CNT1 back to the first playback apparatus 20.

Furthermore, the first playback apparatus 20 may be structured to concurrently play back the first content CNT1 in association with the second content CNT2-1-n that is received from the server 30. For example, when the first content CNT1 is a movie and the second content CNT2-1-n is subtitles data of the movie, the first playback apparatus 20 can synchronously play back the movie and the subtitles on the display screen.

(5) The first playback apparatus 20 described above acquires the content data CNTDATA from the recording medium

10. Alternatively, however, the first playback apparatus 20 may acquire the content data CNTDATA over a network.

(6) The first playback apparatus 20 may be structured to generate playback position information TI1 and transmit the playback position information TI1 to the server 30, regardless of whether request information REQ is received from a user.

For example, the first playback apparatus 20 may generate and transmit playback position information TI1 to the server 30 every 10 seconds during playback of a movie. With this structure, the second playback apparatus 40 is allowed to acquire a network content without requiring a user to input request information REQ to the first playback apparatus 20. Furthermore, the playback of a network content by the second playback apparatus 40 can be carried out in association with the playback of a package content by the first playback apparatus 20.

(7) The control unit 206 of the first playback apparatus 20 may accumulate pieces of playback position information TI1 each generated upon receipt of request information REQ from the request input unit 205, instead of immediately transmitting the playback position information TI1 to the server 30 from the transmission unit 207. After the playback of the first content CNT1 finishes, the first playback apparatus 20 may then receive a user selection of a piece of playback position information to be transmitted to the server 30. To this end, the first playback apparatus

20 may generate thumbnail images as shown in FIG. 16A based on the accumulated pieces of playback position information, and display the thumbnail images on the output unit 210.

With this structure, a user is allowed to provisionally select a plurality of scenes of his interest during the movie playback. After the movie ends, the user further selects from the plurality of thumbnail images a scene to which a related content the user desires to acquire. In addition, this structure allows the user to concentrate on the movie during the playback. After the move, the user acquires, using the second playback apparatus 40, a network content, which is wall paper data as shown in FIG. 16B.

(8) The first playback apparatus 20 may be structured to receive request information REQ that includes information specifying a point on one screen image of the first content CNT1 being played back. Thus, the first playback apparatus 20 transmits to the server 30, playback position information TI1 that includes the information specifying the point on the screen image.

This structure enables the first playback apparatus 20 to transmit playback position information that indicates a network content related not only to a specific screen image of a first content but also to a specific point on the screen image that a user desires. Thus, contents provider are allowed to distribute contents meeting users' needs in detail.

For example, a user specify with a mouse a point on

a screen image of the first content CNT1 being played back. The control unit 206 acquires the location of the specified point within the screen image. The control unit 206 then transmits playback position information TI1 that includes the location of the on-screen point, from the transmission unit 207 to the server 30.

Furthermore, the operation unit 209 of the first playback apparatus 20 may be provided with buttons for selecting questions regarding characters and items appearing in the first content CNT1 during play back. The questions may include "What is this?" and "Who is this?" When a user specifies a desired point on a screen displaying a specific scene and pushes the "Who is this?" button, the server 30 transmits the profile of the character appearing at the specified point in the specified scene. When a user specifies a desired point on a screen displaying a specific scene and pushes the "What is this?" button, the server 30 transmits detailed information about, or a URL of a Web site related to the item appearing at the specified point in the specified scene.

(9) The first playback apparatus 20 specifies playback positions of a content using the counter CTR. However, the information used to specify playback positions of a content is not limited to the counter CTR. For example, in the case of content data CNTDATA recorded on an optical disc, playback positions may be specified using the optical disc's sector numbers, track numbers, angle numbers of

multi-angle, or any combination thereof.

This arrangement ensures that the first playback apparatus 20 provides accurate playback position information to the server 30. This holds even if the first content CNT1 includes a branch so that one of a plurality of predetermined scenarios is selected by a user or the first content CNT1 is a multi-angle content including a plurality of sets of images.

(10) The first playback apparatus 20 may receive, along with an input of request information REQ, information showing the level of user's interest to the first content CNT1 being played back. Furthermore, the first playback apparatus 20 may transmit, along with playback position information TI1, the information showing the inputted level of user's interest to the server 30. With this arrangement, content providers are allowed to provide network contents in consideration of the levels of user's interest.

For example, a user inputs using a key pad the score representing the level of user's interest to the movie being played back. The first playback apparatus 20 transmits the inputted score to the server 30. When the score is relatively high, the server 30 transmits to the first playback apparatus 20, a movie that is of a similar type to the first content CNT1. On the other hand, when the score is relatively low, the server 30 transmits to the first playback apparatus 20 a movie of a different type from the first content CNT1.

(11) The control unit 206 of the first playback apparatus 20 may have a function of extracting, via the access unit 201, part of the first content CNT1 currently outputted from the output unit 210. Furthermore, the playback position information TI1 that the first playback apparatus 20 transmits may include, in place of the counter CTR-n, the part of the first content CNT1 extracted by the control unit 206.

That is, on receiving request information REQ via the operation unit 209, the first playback apparatus 20 extracts part of the currently played first content CNT1, and transmits playback position information TI1 that includes the extracted part of the first content CNT1 to the server 30. On receiving the playback position information TI1, the server 30 extracts the part of the first content CNT1 from the received playback position information TI1. The server 30 then conducts some conversion processing to generate a second content CNT2, and transmits the thus generated second content CNT2 to the second playback apparatus 40.

This arrangement eliminates the need for the server 30 to generate, store, and manage a plurality of second contents in advance.

(12) The first playback apparatus 20 may be provided with a function allowing a user to cancel a request for a network content after the request input unit 205 receives request information REQ and before the transmission unit

207 transmits playback position information TI1 to the server 30.

Furthermore, the overall system may be provided with such a function allowing a user to cancel a request for
5   a network content after the request input unit 205 of the first playback apparatus 20 receives request information REQ and before the server 30 transmits a network content to the second playback apparatus 40.

(13) The first playback apparatus 20 may be structured
10   without the transmission unit 207, so that the output unit 210 may be structured to output playback position information TI1 to the outside. In addition, the second playback apparatus 40 may additionally include an input unit and a transmission unit for input and transmission
15   of playback position information TI1, respectively. A user inputs playback position information TI1 outputted from the output unit 210 of the first playback apparatus 20 to the input unit of the second playback apparatus 40. The second playback apparatus 40 transmits the thus inputted
20   playback position information TI1 to the server 30, thereby requesting transmission of a network content.

This structure allows the second playback apparatus 40 to acquire a network content related to the first content CNT1 being played back by the first playback apparatus 20,
25   even if the first playback apparatus is off the network 50.

The playback position information TI1 that the first

45

playback apparatus 20 outputs to the outside may be G-Code for use in video recording or QR (Quick Response) code, which is new generation bar code.

(14) The server 30 may be structured to receive a plurality of pieces of playback position information from the first playback apparatus 20 and generate a new network content by combining a plurality of network contents corresponding to the pieces of playback position information. The new network content is then transmitted to the second playback apparatus 40.

For example, during playback of a movie by the first playback apparatus 20, a user inputs request information REQ to the first playback apparatus 20 each time the user's favorite character makes appearance in the movie. Upon each input of request information REQ, the first playback apparatus 20 generates playback position information and transmits the thus generated playback position information to the server 30. The server 30 acquires still images of scenes corresponding to a plurality of pieces of playback position information having been received, and generates a single piece of still image album data using the thus acquired still images. The resulting still image album data is transmitted as a second content from the server 30 to the second playback apparatus 40.

(15) The server 30 may by structured to carry out billing processing to charge a user that owns the first playback apparatus 20 or the second playback apparatus 40 for delivery

of the second content CNT2-1-n. In the billing processing, the user identifier UID-1 may be used to identify the user.

Furthermore, the server 30 may perform the billing processing before or after transmitting the second content CNT2-1-n.

There may be variety of ways for the price setting. For example, a sample content and a commodity content may be priced differently, or the price may differ depending on the number of usage times. Specifically, a sample content, which is a file of a small-sized image, may be provided for free, whereas a commodity content, which is a file of a relatively clear and larger-sized image, may be provided on a chargeable basis. Alternatively, wallpaper data may be provided free of charge for the first time and on a chargeable basis for the second time onward.

(16) The server 30 may be structured without the destination storage unit 303 so that the destination acquiring unit 302 acquires the destination address ADR-1 from an external source via the network 50. In addition, the server 30 may be structured without the content storage unit 305, so that the content acquiring unit 304 acquires the second content CNT2-1-n from an external source via the network 50.

(17) The server 30 may transmit the second content CNT2-1-n to the second playback apparatus 40 over a network other than the network 50 via which the first playback apparatus 20 transmits playback position information TI1

to the server 30.

For example, the first playback apparatus 20 transmits playback position information TI1 to the server 30 via a dedicated line, and the server 30 transmits the second content CNT2-1-n to the second playback apparatus 40 via the Internet.

(18) It is applicable that the first playback apparatus 20 and the second playback apparatus 40 are owned by different users, which still falls within the scope of the present invention.

(19) The present invention may be embodied as any of the methods described above. Also, the present invention may be embodied as a computer program for the computer to carry out any of the above methods or a digital signal representing the computer program.

Furthermore, the present invention may be embodied as a computer-readable recording medium storing the computer program or the digital signal. Examples of such a recording medium include a flexible disk, a hard disk, a CD-ROM, an MO, a DVD, a DVD-ROM, a DVD-RAM, a BD (Blu-ray Disc) and a semiconductor memory. Furthermore, the present invention may be embodied as the computer program or the digital signal stored on any recording medium mentioned above.

Furthermore, the present invention may be embodied as the computer program or the digital signal transmitted via an electric communication line, wireless communications,

a wired communication line, or a network typified by the Internet.

Furthermore, the present invention may be embodied as a computer system that includes a microprocessor and a memory. The memory stores the computer program mentioned above. The microprocessor may operate according to the computer program.

Furthermore, the program or the digital signal may be transferred in form of a recording medium mentioned above, or via a network mentioned above, so that the program or the digital signal may be executed by another independent computer system.

(20) The present invention may be any combination of the above-described embodiment and modifications.

<<SECOND EMBODIMENT>>

Now, a description is given to a content-related information delivery system 2 consistent with a second embodiment of the present invention.

In the content-related information delivery system 2, a playback apparatus is enabled to display BBS data acquired via a network, during playback of a content recorded on a recording medium. Here, a user is allowed to skip the playback of the content to a playback position determined by the user with reference to the messages on the BBS.

<Configuration>

Here, a description is given to the configuration of the content-related information delivery system 2.

FIG. 17 is a view showing the configuration of the content-related information delivery system 2. As shown in the figure, the content-related information delivery system 2 includes a recording medium 60, a playback apparatus 70, and a server 80.

The playback apparatus 70 and the server 80 are separately connected to the network 50. The recording medium 60 is mounted on the playback apparatus 70 when put to use. The specific example of the network 50 is the Internet.

1. Recording Medium 60

The recording medium 60 is a portable medium having pre-recorded content data CNTDATA. Specifically, the recording medium 60 is a DVD-ROM.

FIG. 18 is a view showing the content data CNTDATA recorded on the recording medium 60. As shown in the figure, the content data CNTDATA is composed of a content identifier CID-1 and a first content CNT1.

Specifically, the first content CNT1 is content data generated by compression coding a movie to a MPEG-2 (Moving Picture Expert Group-2) format. Note that the MPEG-2 format is mentioned by way of example and without limitation. Any format other than MPEG-2 may be used as long as the playback apparatus 70 supports the format.

The content identifier CID-1 is a code or a character string uniquely identifying the first content CNT1. In this embodiment, the content identifier CID-1 is a movie title of the first content CNT1. Instead of a movie title, however, the content identifier CID-1 may be a disc number uniquely identifying the recording medium 60.

2. Playback Apparatus 70

FIG. 19 is a functional block diagram of the playback apparatus 70. As shown in the figure, the playback apparatus 70 includes a first control unit 701, a decode unit 702, a content identifier storage unit 703, a user information storage unit 704, a request input unit 705, a second control unit 706, a transmission unit 707, a reception unit 708, a permission input unit 709, a server address input unit 710, an operation unit 711, and an output unit 712.

Specifically, the playback apparatus 70 is a DVD system composed of a DVD player and a display unit. More specifically, the playback apparatus 70 is a computer system composed generally of a microprocessor, a ROM, a RAM, a hard disk unit, a network connection unit, and an MPEG decoder.

(1) First Control Unit 701

The first control unit 701 includes a control unit and a DVD-ROM drive unit. The control unit is composed generally of a microprocessor, a ROM and a RAM. The DVD-ROM

51

drive unit is composed generally of a turn table, an optical pickup, and a track buffer.

Upon mounting of the recording medium 60 on the turn table, the first control unit 701 extracts the content identifier CID-1 from the content data CNTDATA stored on the recording medium 60, and outputs the extracted content identifier CID-1 to the content identifier storage unit 703. Next, the first control unit 701 sequentially reads the first content CNT1 from the recording medium 60 and outputs the read first content CNT1 to the decode unit 702.

In addition, the first control unit 701 receives bulletin board information BBS1 shown in FIG. 24 from the reception unit 708. The bulletin board information BBS1 is information for generating an electronic bulletin board related to the first content CNT1. As shown in the figure, the bulletin board information BBS1 is composed of posted messages each include playback position information. The first control unit 701 extracts playback position information included in the received bulletin board information BBS1 and stores the extracted playback position information in the internal memory area. The bulletin board information other than the playback position information is outputted to the decode unit 702. The thus outputted bulletin board information BBS1 is displayed via the decode unit 702 on the output unit 712 as part of a combined content CMBCNT. An example of the combined content CMBCNT is shown in FIG. 20.

During the time the output unit 712 displays the combined content CMBCNT as shown in FIG. 20, the first control unit 701 receives permission information PRM from the permission input unit 709.

Specifically, a consideration is given here to the case where the first control unit 701 receives permission information PRM showing that a playback button 721a is selected by a user. On receiving the permission information PRM showing the selection of playback button 721a, the first control unit 701 temporarily suspends extraction of the first content CNT1 from the recording medium 60, and also suspends output of the bulletin board information BBS1 to the decode unit 702. The first control unit 701 then reads the playback position information TI1-1 which corresponds to the selected playback button 721a from the internal memory area.

As shown in FIG. 21, the playback position information TI1-1 is composed of the content identifier CID-1 and the counter CTR-n. The counter CTR-n specifies a playback position of the "My Favorite Scene" that is recommended in a posted message 721. In other words, the counter CTR-n shows a time taken to reach the playback position when the first content CNT1 is played back from the beginning.

The first control unit 701 changes the current playback position according to the counter CTR-n included in the playback position information TI1-1, and resumes extraction of the first content CNT1 starting from the new playback

position. Then, the first control unit 701 resumes output of the first content CNT1 extracted from the recording medium 60 and the bulletin board information BBS1 to the decode unit 702.

5   (2) Decode Unit 702

The decode unit 702 is composed generally of an MPEG-2 video decoder, an MPEG-2 audio decoder, a video buffer, and an audio buffer.

The decode unit 702 separates the first content CNT1

10   that is sequentially outputted from the first control unit 701, into video data and audio data. The decode unit 702 decompresses the video data to a video signal using the MPEG-2 video decoder, and the audio data to an audio signal using the MPEG-2 audio decoder. The decode unit 702

15   sequentially outputs the resulting video and audio signals to the output unit 712.

When the first control unit 701 outputs the first content CNT1 and the bulletin board information BBS1, the decode unit 702 generates a video signal for displaying

20   the first content CNT1 in a smaller size, thereby allowing the first content CNT1 and the bulletin board information BBS1 to be concurrently displayed on one screen as shown in FIG. 20. The decode unit 702 outputs the resulting video signal and the audio signal to the output unit 712, along

25   with the bulleting board information BBS1.

Note that the decode unit 702 may be implemented by software or hardware.

(3) Content Identifier Storage Unit 703

The content identifier storage unit 703 has a memory area for storing content identifiers. On receiving the content identifier CID-1 from the first control unit 701, the content identifier storage unit 703 stores the received content identifier CID-1 into the memory area.

(4) User Information Storage Unit 704

The user information storage unit 704 stores the user identifier UID-1'. The user identifier UID-1' is an identifier uniquely identifying the user of the playback apparatus 70. Specifically, the user identifier UID-1' used herein is a serial number of the playback apparatus 70 written into the user information storage unit 704 at the time of manufacturing.

It is naturally appreciated that the user identifier UID-1' is not limited to the serial number of the playback apparatus. Alternatively, a user's credit card number may be used as the user identifier UID-1'. In this case, the user inputs his credit card number via the operation unit 711 on initialization of the playback apparatus 70. In response, the second control unit 706 stores the received credit card number to the user information storage unit 704.

Alternatively, the user identifier UID-1' may be assigned to the user by making user registration on a content provider's server via a Web service. The user then inputs the thus assigned user identifier UID-1' to the playback

apparatus 70 using the operation unit 711.

(5) Request Input Unit 705

Specifically, the request input unit 705 includes an infrared receiver, for example. The request input unit 705 receives an infrared signal indicative of request information REQ from the operation unit 711, and passes the received request information REQ to the second control unit 706.

The request information REQ is generated in response to a user operation made to the operation unit 711 during the time the output unit 712 is producing playback of the first content CNT1. The request information REQ requests that bulletin board information BBS1 related to the first content CNT1 be acquired and displayed.

(6) Second Control Unit 706

The second control unit 706 is composed generally of a microprocessor, a ROM, and a RAM. On receiving request information REQ from the request input unit 705, the second control unit 706 acquires the content identifier CID-1 from the content identifier storage unit 703, and the user identifier UID-1' from the user information storage unit 704. The second control unit 706 then generates bulletin board request information REQBBS shown in FIG. 22, from the acquired content identifier CID-1 and user identifier UID-1'. The thus generated bulletin board request information REQBBS is outputted to the transmission unit 707.

(7) Transmission Unit 707

The transmission unit 707 receives the bulletin board request information REQBBS from the second control unit 706, and also receives the server address S'-ADR from the server address input unit 710. The transmission unit 707 transmits the bulletin board request information REQBBS to the server address S'-ADR via the network 50.

(8) Reception Unit 708

The reception unit 708 receives the bulletin board information BBS1 from the server 80 via the network 50, and outputs the received bulletin board information BBS1 to the first control unit 701. The details of bulletin board information BBS1 will be described later.

(9) Permission Input Unit 709

The permission input unit 709 includes an infrared receiver, for example. The permission input unit 709 receives permission information PRM outputted from the operation unit 711 by way of infrared communications.

The permission information PRM is information generated at a push of a specific button on the operation unit 711 by a user, during the time the combined content CMBCNT is being displayed on the output unit 712 as shown in FIG. 20. For example, the permission information PRM is generated at a push of a playback button 721a shown in FIG. 20, and shows the current playback position of the first content CNT1 is requested to be changed to a playback position associated with the comment included in the posted

message 721.

(10) Server Address Input Unit 710

Specifically, the server address input unit 710
includes an infrared receiver, for example. The server
address input unit 710 receives an infrared signal
indicative of the server address S'-ADR from the operation
unit 711, and outputs the received server address S'-ADR
to the transmission unit 707. Note that the server address
S'-ADR is a network address of the server 80, such as an
e-mail address or an IP address.

(11) Operation Unit 711

The operation unit 711 includes an operation panel
provided with a plurality of buttons, for example, and also
includes an infrared emitter. The operation unit 711 is
a remote controller via which the playback apparatus 70
is remotely controlled. At a push of a button on the
operation panel by a user, the operation unit 711 generates
an operation signal corresponding to the pushed button and
transmits the operation signal by way of infrared
communications to the infrared receiver of the playback
apparatus 70.

Specific examples of the operation signals generated
by the operation unit 711 include request information REQ,
server address S'-ADR, and permission information PRM. At
a push of a specific button by a user during playback of
the first content CNT1 by the output unit 712, the operation
unit 711 generates request information REQ and transmits

the thus generated request information REQ to the request input unit 705. Also, the operation unit 711 receives a user input of the server address S'-ADR and transmits the received server address S'-ADR to the server address input

5   unit 710. Also, at a push of an arrow key or a specific button by a user during playback of the combined content CMBCNT, the operation unit 711 generates permission information PRM indicating that the playback button 721a included in the posted message 721 is selected and transmits

10   the thus generated permission information PRM to the permission input unit 709.

(12) Output Unit 712.

Specifically, the output unit 712 is a display unit including a display screen and a speaker. The output unit

15   712 sequentially outputs the video signal and the audio signal received from the decode unit 702 to the display screen and the speaker, respectively.

The output unit 712 receives from the decode unit 702, the video signal generated by decoding the first content

20   CNT1 and the bulletin board information BBS1 acquired from the server 80. Upon receipt, the output unit 712 outputs, as shown in FIG. 20, the first content CNT1 on the left half to the display screen and the bulletin board information BBS1 on the right half of the display screen, thereby

25   generating the combined content CMBCNT on the display screen. The bulletin board information BBS1 includes a plurality of posted messages, and each posted message is composed

59

of a title, a comment, and a playback button.

For example, the posted message 721 shown in FIG. 20 is composed the title "My Favorite Scene", the comment "This is my favorite scene.", and the playback button 721a. When the user selects the playback button 721a, the output unit 712 changes the current playback position of the first content CNT1 to the scene associated with the comment. Similarly, the posted message 722 is composed of the title "Touching Scene", the comment "This scene brought me to tears.", and a playback button 722a. When the user selects the playback button 722a, the output unit 712 changes the current playback position of the first content CNT1 to the scene associated with the comment.

3. Server 80

The server 80 is a BBS server for providing an electronic bulletin board related to contents over the network. The server 80 has a network address, S'-ADR.

FIG. 23 is a functional block diagram of the server 80. As shown in the figure, the server 80 includes a reception unit 801, a destination acquiring unit 802, a destination storage unit 803, a BBS acquiring unit 804, a BBS storage unit 805, and a transmission unit 806.

Specifically, the server 80 is a computer system composed generally of a microprocessor, a ROM, a RAM, a hard disk unit, and a network connection unit.

(1) Reception Unit 801

The reception unit 801 includes a network connection unit, and receives bulletin board request information REQBBS from the playback apparatus 70. As shown in FIG. 22, the bulletin board request information REQBBS is composed of the user identifier UID-1' and the content identifier CID-1. The reception unit 801 extracts the user identifier UID-1' from the received bulletin board request information REQBBS, and outputs the extracted user identifier UID-1' to the destination acquiring unit 802. In addition, the reception unit 801 extracts the content identifier CID-1 from the received bulletin board request information REQBBS and outputs the extracted content identifier CID-1 to the BBS acquiring unit 804.

(2) Destination Acquiring Unit 802

The destination acquiring unit 802 receives the user identifier UID-1' from the reception unit 801. The destination acquiring unit 802 then acquires from the destination storage unit 803, the destination address ADR-1' associated with the received user identifier UID-1'.

(3) Destination Storage unit 803

The destination storage unit 803 stores user identifiers and destination addresses in a one-to-one association. Here, each destination address may be a network address, such as an e-mail address or an IP address, of an apparatus identified by a corresponding user identifier. Specifically, the destination storage unit 803 stores the user UID-1' in association with the

destination address ADR-1′. The destination address ADR-1′ is a network address of the playback apparatus 70.

Note that the destination storage unit 803 stores the user identifiers and destination addresses through prior user registration. For example, users may in advance inform the user identifiers and destination addresses to the server 30, by post or via a Web service.

(4) BBS Acquiring Unit 804

The BBS acquiring unit 804 receives the content identifier CID-1 from the reception unit 801. The BBS acquiring unit 804 then acquires bulletin board information BBS1 associated with the received content identifier CID-1 from the BBS storage unit 805, which will be described later. The BBS acquiring unit 804 outputs the acquired bulletin board information BBS1 to the transmission unit 806.

(5) BBS Storage Unit 805

The BBS storage unit 805 stores content identifiers and pieces of bulletin board information in a one-to-one association, as shown in FIG. 24. According to the figure, the content identifier CID-1 is stored in association with the bulletin board information BBS1, the content identifier CID-2 is stored in association with the bulletin board information BBS2 … and the content identifier CID-k is stored in association with the bulletin board information BBSk.

The bulletin board information is for providing over the network an electronic bulletin board related to the

content identified by a corresponding content identifier. Hereinafter, a description is given to the bulletin board information BBS1 as an example.

The bulletin board information BBS1 is for providing an electronic bulletin board related to the first content CNT1 identified by the content identifier CID-1. The bulletin board information includes a plurality of posted messages 721, 722…. Each posted message is composed of a title, a comment, and playback position information. The posted message 721 is composed of the title "My Favorite Scene", the comment "This is the scene I recommend.", and the playback position information TI1-1. The playback position information TI1-1 specifies the playback position of the scene to which the comment relates. The posted message 722 is composed of the title "Touching Scene", the comment "This scene brought me to tears.", and the playback position information TI1-2. The playback position information TI1-2 specifies the playback position of the scene to which the comment relates.

(4) Transmission Unit 806

The transmission unit 806 receives the destination address ADR-1' from the destination acquiring unit 806, and the bulletin board information BBS1 from the BBS acquiring unit 804. The transmission unit 806 transmits the bulletin board information BBS1 to the destination address ADR-1' via the network 50.

<Operation>

Now, a description is given to the operation of the content-related information delivery system 2, with reference to a flowchart shown in FIGs. 25 and 26.

The playback apparatus 70 reads from the recording medium 60 mounted thereon, the content identifier CID-1 included in the content data CNTDATA, and stores the read content identifier CID-1 to the content identifier storage unit 703 (step S300). The second control unit 706 judges whether request information REQ is received via the request input unit 705. If no request information REQ has been received (step S301, NO), the processing goes onto a step S314.

On receiving request information REQ (step S301, YES), the second control unit 706 reads the user identifier UID-1' from the user information storage unit 704 and reads the content identifier CID-1 from the content identifier storage unit 703. The second control unit 706 generates bulletin board request information REQBBS from the user identifier UID-1' and the content identifier CID-1 (step S302).

The second control unit 706 outputs the thus generated bulletin board request information REQBBS to the transmission unit 707. The transmission unit 707 then acquires the server address S'-ADR from the server address input unit 710 (step S303). The transmission unit 707 transmits the bulletin board request information REQBBS

64

to the server address S'-ADR. The server 80 receives the bulletin board request information REQBBS with the reception unit 801 (step S304).

The reception unit 801 then extracts the user identifier UID-1' and the content identifier CID-1 from the bulletin board request information REQBBS (step S305). The reception unit 801 outputs the extracted user identifier UID-1' to the destination acquiring unit 802 (step S306), and the content identifier CID-1 to the BBS acquiring unit 804 (step S307).

The destination acquiring unit 802 acquires a destination address that corresponds to the user identifier UID-1', with reference to the destination storage unit 803, and transmits the acquired destination address to the transmission unit 806 (step S308). The BBS acquiring unit 804 acquires the bulletin board information BBS1 associated with the content identifier CID-1, and outputs the acquired bulletin board information BBS1 to the transmission unit 806 (step S309).

The transmission unit 806 transmits the bulletin board information BBS1 to the destination address acquired in the step S308. This completes the operation at the server's end. Next, the playback apparatus 70 receives the bulletin board information BBS1 with the reception unit 708 (step S310). The reception unit 708 outputs the bulletin board information BBS1 to the first control unit 701. The first control unit 701 displays the bulletin board information

BBS1 on the output unit 712 via the decode unit 702 (step S311).

The first control unit 701 judges whether permission information PRM has bee received via the permission input unit 709. If no permission information PRM has been received (step S312, NO), the processing goes onto a step S314.

If permission information PRM is received (step S312, YES), the first control unit 701 acquires the playback position information TI1-1 that corresponds to the received permission information PRM. The first control unit 701 then changes the current playback position of the first content CNT1 in accordance with the counter CTR-n included in the playback position information TI1-1 (step S313).

Next, the first control unit 701 sequentially extracts the first content CNT1 from the recording medium 60 to the decode unit 702. In response, the decode unit 702 sequentially decodes the received part of the first content CNT1 (step S314). The output unit 712 sequentially outputs the decoded part of the first content CNT1 to the display screen and the speaker (step S315).

The first control unit 701 judges whether the entire first content CNT1 has been outputted. On judging that the first content CNT1 is not yet completely outputted (step S316, NO), the processing continues back from the step S314. On judging that the output of the first content CNT1 is completed (step S316, YES), the playback apparatus 70

terminates the processing.

<Modifications>

The present invention has been described by way of
the above embodiment. It is naturally appreciated, however,
that the present invention is not limited to the specific
embodiment disclosed above, and modifications including
the following still fall within the scope of the present
invention.

(1) The server 80 may supply to the playback apparatus
70, the playback position information alone rather than
the bulletin board information BBS1. This arrangement
still falls within the scope of the present invention.

For example, at a user request, the server 80 may
transmit playback position request information REQT1 to
the server 80. On receiving the playback position request
information REQT1, the server 80 may transmit to the playback
apparatus 70, playback position information specifying a
scene that the content provider recommends.

(2) Furthermore, the playback position information
that the server 80 transmits to the playback apparatus 70
may contain playback control information controlling the
playback operation of the playback apparatus 70. The
playback apparatus 70 may carry out the specified playback
operation according to the playback control information
at the time when the current playback position of the first
content CNT1 reaches a position specified by the playback

67

position information.

Such playback control information may be information for displaying a comment on the screen or information for skipping the playback to another scene.

5   (3) The playback apparatus 70 may be so structured that the second control unit 706 transmits bulletin board request information REQBBS to the server 80 continuously or periodically, irrespective of whether the request input unit 705 receives a user input of request information REQ.

10   Furthermore, the server 80 may be structured to manage a plurality of pieces of bulletin board information associated with a plurality of playback positions of the first content CNT1.

With the above structure, during playback of a movie,
15   the playback apparatus 70 continuously or periodically transmits bulletin board request information REQBBS to the server 80. Thus, the playback apparatus 70 is allowed to acquire bulletin board information without requiring a user input of request information REQ. More specifically, the
20   playback apparatus 70 is allowed at all times to acquire bulletin board information that is associated with the current playback position of the first content CNT1.

Note that the playback apparatus 70 may be structured to display bulletin board information after completion of,
25   not during, the playback of the first content CNT1 the playback.

(4) The request information REQ that the playback

apparatus 70 transmits to the server 80 may contain information specifying a point on a screen displaying a specific scene. Such information is generated according to a user selection of a specific point on a screen displaying

5   a specific scene of the first content CNT1.

With the above structure, the playback apparatus 70 is allowed to request the server 80 for information related to a user selected point on a screen displaying a specific scene of the first content CNT1.

10   (5) Furthermore, each posted message included in the bulletin board information BBS1 that the server 80 transmits to the playback apparatus 70 may contain, in addition to playback position information, information specifying a point on a screen displaying a scene specified by the playback

15   position information.

With the above structure, the user is informed not only recommended scenes of the first content CNT1 being played back on the playback apparatus 70, but also specific points on the scenes that are recommended. That is, the

20   content provider can present more detailed information about the recommended scenes. For example, the playback apparatus 70 may display a symbol such as a square or a circle overlaid on a specific object (e.g. the building appearing on the right top corner of the screen), thereby

25   presenting recommendation information in more detail to, the user.

(6) The content provider may carry out billing

processing to charge a user of the playback apparatus 70 at the time when the server 80 transmits the bulletin board information BBS1 to the playback apparatus 70. In the billing processing, the content provider may identify the user with the user identifier.

Note that the server 80 may carry out the billing processing either before or after transmitting the bulletin board information BBS1. Furthermore, the amount to be charged may be determined in variety of ways. For example, the amount to be charged may be determined depending on the number of usage times. Alternatively, the bulletin board information may be provided free of charge for the first time and on a chargeable basis for the second time onward.

(7) The playback apparatus 70 may check whether the content identifier included in the playback position information TI1-1 (see FIG. 21) indeed matches any of the content identifiers stored in the content identifier storage unit 703. The playback apparatus 70 displays the received bulletin board information BBS1 only after confirming that there is a match.

With the above structure, the server 80 may transmit a plurality of pieces of bulletin board information to an indefinite number of apparatuses. Then, the playback apparatus 70 selectively uses bulletin board information of which content identifier matches the content identifier CID-1 included in the content data CNTDATA.

(8) The server 80 may encrypt the bulletin board information BBS1 before transmission to the playback apparatus 70 in order to prevent unauthorized distribution of contents.

(9) The playback apparatus 70 may change the current playback position of the first content CNT1 according to the playback position information TI1-1, TI1-2 … included in the received bulletin board information BBS1, even if the permission input unit 709 receives no user input of permission information PRM. In this case, the playback apparatus 70 may display a confirmation message reading "Do you want to change the current playback position?"

(10) The present invention may be embodied as any of the methods described above. Also, the present invention may be a computer program for the computer to carry out any of the above methods or a digital signal representing the computer program.

Furthermore, the present invention may be embodied as a computer-readable recording medium storing the computer program or the digital signal. Examples of such a recording medium include a flexible disk, a hard disk, a CD-ROM, an MO, a DVD, a DVD-ROM, a DVD-RAM, a BD (Blu-ray Disc) and a semiconductor memory. Furthermore, the present invention may be embodied as the computer program or the digital signal recorded on any recording medium mentioned above.

Furthermore, the present invention may be embodied

as the computer program or the digital signal transmitted via an electric communication line, wireless communications, a wired communication line, or a network typified by the Internet.

5   Furthermore, the present invention may be embodied as a computer system composed of a microprocessor and a memory. The memory stores the computer program mentioned above. The microprocessor may operate according to the computer program.

10   Furthermore, the present invention may be embodied as a computer system composed of a microprocessor and a memory. The memory stores the computer program mentioned above. The microprocessor may operate according to the computer program.

15   Furthermore, the program or the digital signal may be transferred in form of a recording medium mentioned above, or via a network mentioned above, so that the program or the digital signal may be executed by another independent computer system.

20   (11) The present invention may be any combination of the above-described embodiment and modifications.

           (12) The present invention may be any combination of the above-described first and second embodiments.

25   <Recapitulation>

           As has been described above, the present invention provides a content-related information delivery system that

includes a server and a playback apparatus. The server transmits playback position information specifying a playback position of a content to the playback apparatus. The playback apparatus receives the playback position

5   information from the server, and plays back the content starting from the position specified by the received playback position information.

With the structure stated above, the playback apparatus is enabled to play back the content from the position

10 recommended by the server.

In another aspect, the present invention provides a playback apparatus for a content. The playback apparatus includes: a playback position information receiving unit operable to receive playback position information from a

15 server; and a playback unit operable to play back the content starting from a position specified by the received playback position information.

With the structure stated above, the playback apparatus is enabled to play back the content from the position

20 recommended by the server.

Here, the playback unit may start playback of the content from the position specified by the playback position information, on receiving a user instruction requesting to change the current playback position.

25 With the structure stated above, the playback apparatus starts playback of the content from the position specified by the playback position information in response to a user

73

instruction, thereby increasing the user convenience.

Here, the playback apparatus may further include a playback position information request unit operable to request, on receiving a user request, the server for playback position information.

With the structure stated above, the playback apparatus issues a request for playback position information to the server, in response to a user request. Thus, the user is allowed to request and acquire playback position information only when necessary. As a result, the user convenience is increased.

Here, when the playback position information receiving unit receives the playback position information during playback of the content, the playback unit may change the current playback position to the playback position specified by the received playback position information, and resume playback of the content.

With the structure stated above, the playback apparatus is allowed to request the server for a recommended playback position, even during playback of the content. The playback apparatus can then play back the content from the recommended playback position according to the playback position information transmitted from the server.

Here, the playback position information receiving unit may receive from the server, an electronic bulletin board that includes the playback position information.

With the structure stated above, the playback apparatus

receives the playback position information as the electronic bulleting board. Thus, the user can instruct the change of the current playback position as necessary, with reference to messages posted on the electronic bulletin board.

Here, the playback unit may be provided with a display screen for outputting the content and the electronic bulletin board. The display screen concurrently displays the content and the electronic bulletin board thereon.

Furthermore, the playback unit may generate a combined content that is composed of the above-mentioned content and the electronic bulletin board, and output the resulting combined content on the display screen.

With the structure stated above, the user can view the content and the electronic bulletin board at the same time.

Here, the playback apparatus may further include a display screen for displaying the content thereon. The playback apparatus receives an instruction selecting a desired point on the display screen during playback of the content, and acquires information showing an on-screen position of the selected point. The playback position information request unit transmits to the server the playback position information that includes the on-screen position information.

With the structure stated above, the playback apparatus is enabled to receive a selection of a point on a screen

displaying playback of the content from the user viewing the content. The playback apparatus then issue to the server a request for the playback position information relating to the selected on-screen point.

5   Here, the content may be stored on a portable recording medium. The playback position information receiving unit receives the playback position information specifying a position on the recording medium. The playback unit plays back the content starting from the specified position.

10   With the structure sated above, also in the case of the content stored on a recording medium, the playback apparatus is enabled to receive the playback position information from the server to play back the content from the position recommended by the server.

15   Here, the playback position information request unit may read a content identifier uniquely identifying the content from the recording medium, and transmit to the server the playback position request information that includes the read content identifier.

20   With the structure stated above, also in the case where the recording medium stores a plurality of contents, the playback apparatus transmits the content identifier to the server. Thus, the playback apparatus is enabled to acquire playback position information that relates to a desired 25   one of the contents.

In another aspect, the present invention provides a server including: a playback position information acquiring

76

unit operable to acquire playback position information specifying a playback position of a content; and a playback position information transmitting unit operable to transmit the acquired playback position information to a playback

5   apparatus that plays back the content.

With the structure stated above, the server is enabled to control the position of the content played back by the playback apparatus. Thus, the server can cause the playback apparatus to play back the content starting from any playback

10   position recommended at the server's end.

Here, the server may further include a playback position information storage unit operable to store playback position information in association with a content identifier that uniquely identifies the content. The

15   playback position information acquiring unit acquires the playback position information from the playback position information storage unit, with reference to the content identifier.

With the structure stated above, the server can store

20   a plurality of pieces of playback position information each in association with a content identifier. Thus, the server can store, for each of a plurality of contents, a piece of playback position information specifying a recommended playback position.

25   Here, the server may further include a request receiving unit operable to receive request information that includes a content identifier from the playback apparatus.

The playback position information acquiring unit acquires from the playback position information storage unit, a piece of playback position information associated with the received content identifier.

5   With the structure stated above, the server transmits playback position information in response to a request from the playback apparatus. Thus, it is possible to deliver playback position information that meets the needs of the user.

10   Here, the playback position information storage unit may store an electronic bulletin board that includes the playback position information. The playback position information acquiring unit acquires the electronic bulletin board from the playback position information storage unit.
15 The playback position information transmitting unit transmits the thus acquired electronic bulletin board to the playback apparatus.

With the structure stated above, the server transmits playback position information as part of an electronic
20 bulletin board. With the advantage of the electronic bulletin board, there is provided a better service than in the case of transmitting playback position information alone.

Here, the playback position information storage unit
25 stores electronic bulletin boards each relates to an image included in one of scenes of the content. Each electronic bulletin board is stored in association with on-screen

position information specifying the position of the image on a display screen displaying the respective scene. The request receiving unit receives the request information that includes the on-screen position information. The playback position information acquiring unit acquires from the playback position information storage unit, an electronic bulletin board associated with the on-screen position information included in the received request information.

With the structure stated above, the server is enabled to deliver a particular electronic bulletin board that relates to a character or an item appearing in a scene displayed on the playback apparatus. Thus, it is possible to transmit the playback position information that closely meets the user needs.

Here, the playback apparatus may further include: a user identifier receiving unit operable to receive a user identifier uniquely identifying the user of playback apparatus; and a billing unit operable to charge the user based on the received user identifier.

With the structure stated above, the server may charge the user for playback position information provided at a request of the user.

Industrial Applicability

The present invention is applicable in industries for providing contents to users. For example, a content

provider may offer additional services to users in possession of contents having been distributed in form of a recording medium. Through the services, information related to the contents is delivered to the users over a

5 network in a manner closely meeting the user needs.